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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,986	11/05/2001	Fereidoon Heydari	01-S-045 (1678-47)	7945

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STMICROELECTRONICS, INC.  
MAIL STATION 2346  
1310 ELECTRONICS DRIVE  
CARROLLTON, TX 75006

EXAMINER
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NEGRON, DANIEL L

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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10/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/993,986	<b>Applicant(s)</b> HEYDARI ET AL.	
	<b>Examiner</b> Daniell L. Negrón	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-16, 19, 20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-15, 24-29, 39-42 and 49-56 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11, 16, 19, 20, 22, 23, 30-38 and 43-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on July 5, 2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-5, 7-11, 16, 19, 20, 22, 23, 30-38, and 43-48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception to 35 U.S.C. 101 and are directed to a servo burst demodulator and corresponding method for executing nothing more than a mathematical algorithm and are not directed to a practical application of such judicial exception because the claim does not set forth a useful, concrete, and tangible result.

### ***Allowable Subject Matter***

3. Claims 12-15, 24-29, 39-42, and 49-56 are allowed.
4. The following is an examiner's statement of reasons for allowance:

Claims 12-15, 24-29, 39-42, and 49-56 are allowed as the prior art does not teach or suggest the applicant's invention. The applicant's remarks in the pre-appeal brief request for review filed June 27, 2007 in response to the Office action mailed June 6, 2007 distinguish the application's invention over the references that accompanied the Office Action.

Regarding claims 24, 25, 49 and 50, claim 24 discloses a method for demodulating position bursts, comprising adding even samples of a first servo position burst to generate a first sum, adding odd samples of the first servo position burst to generate a second sum, squaring the first and second sums, adding the squared first and second sums to generate a third sum, and calculating the square root of the third sum, which is neither disclosed or an obvious variation of the prior art.

Regarding claim 14, claim 14 discloses a disk drive system comprising a servo circuit coupled to a read head and to a read-head positioning system, the servo circuit operable to sample the read signal, square first and second samples of both a first position burst and a second position burst in a servo wedge located in a data track, add the squared first and second samples of the first position burst to generate a first sum and add the squared first and second samples of the second position burst to generate a second sum, calculate a first square root of the first sum and a second square root of the second sum, calculate a difference between the first and second square roots, and generate the position-error signal equal to the difference, which is neither disclosed or an obvious variation of the prior art.

Regarding claims 12, 13, 15, 27-29, 39-42, and 51-56, claims 12, 15, and 27-29 disclose a method and corresponding apparatus for demodulating position bursts comprising receiving even and odd samples of first and second servo position bursts, summing the even samples for each of the first and second servo position bursts, summing the odd samples for each of the first and second servo position bursts, and calculating a head-position error signal from the sums of the even and odd samples of the first and second bursts only such that the accuracy of the error

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signal is independent of the timing of the samples with respect to the bursts, which is neither disclosed or an obvious variation of the prior art.

Regarding claim 26, claim 26 discloses a method comprising generating a read signal with a read head, the read signal representing position bursts on a data-storage disk, sampling the read signal, squaring first and second samples of both a first position burst and a second position burst located in a data track of the disk, adding the squared first and second samples of the first position burst to generate a first sum, adding the squared first and second samples of the second position burst to generate a second sum; calculating a first square root of the first sum, calculating a second square root of the second sum, calculating a difference between the first and second square roots, generating a position-error signal equal to the difference, and moving the read head toward the center of the data track in response to the position-error signal, which is neither disclosed or an obvious variation of the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559. The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DLN/  
Daniell L. Negrón  
Examiner, Art Unit 2627  
October 15 2007

/William Korzuch/  
SPE, Art Unit 2627